

SEVERN  
TRENT  
SERVICES

**STL Los Angeles**  
1721 South Grand Avenue  
Santa Ana, CA 92705-4808

February 20, 2001

STL LOT NUMBER: **E1A220190**  
PO/CONTRACT: 05160-SEV002

Tel: 714 258 8610  
Fax: 714 258 0921  
[www.stl-inc.com](http://www.stl-inc.com)

Rus Purcell  
Kennedy/Jenks Consultants  
2151 Michelson Drive  
Suite 100  
Irvine, CA 92612

Dear Mr. Purcell,

This report contains the analytical results for the seven samples received under chain of custody by STL Los Angeles on January 22, 2001. These samples are associated with your BRC, former C6 Torrance Harbor Gateway project.

All applicable quality control procedures meet method-specified acceptance criteria. See Project Receipt Checklist for container temperature and conditions. Temperature reading beyond 2 to 6 degrees Celsius is considered not within acceptable criteria unless otherwise noted such as limited transit time from field and test requested. Any matrix related anomaly is footnoted within the report. Geotechnical tests were performed at PTS Laboratories. Please see attached report for any related anomalies.

STL Los Angeles certifies that the test results provided in this report meet all the requirements of NELAC. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at 714-258-8610.

Sincerely,



Diane Suzuki  
Project Manager

cc: Project File



Committed To Your Success

## SEVERN TRENT LABORATORIES

**CHAIN OF CUSTODY RECORD**

000002

RUSH TURNAROUND MAY REQUIRE SURCHARGE

**SEVERN TRENT**  
**LABORATORIES, INC.**  
**STANDARD TERMS**  
**AND CONDITIONS**

**ACCEPTANCE.** Severn Trent Laboratories, Inc. (hereafter referred to as "STL") offers and will accept orders for services (as defined herein) only under the following Standard Terms and Conditions (the "Terms"). These Terms shall not apply if STL and the Customer shall have executed a separate agreement in writing. If specific Terms are not incorporated in the separate agreement those Terms will apply to the Customer. No modifications to the Terms shall be valid and binding unless in writing and signed by an authorized representative of STL. Customer's order for services shall be subject to the Terms and the Terms shall be binding upon receipt of samples to STL. Either party may terminate this agreement at any time by giving written notice of such termination to the other party. Upon termination the customer is subject to payment for all services rendered and expenses incurred up to date in accordance with the applicable Price Schedule.

**INSURANCE.** STL maintains insurance coverage with minimum limits as follows: (a) Comprehensive General Liability- \$1,000,000 each occurrence \$2,000,000 annual aggregate; (b) Comprehensive Automotive Liability Bodily Injury and Property Damage- \$1,000,000 each occurrence. (c) Workman's Compensation- \$500,000 each occurrence and \$500,000 each employee; STL and Customer agree to furnish the other, upon request, certificates attesting to the existence of insurance coverage.

**INDEPENDENT CONTRACTOR.** STL's relationship with Customer under this agreement shall be that of an independent contractor. Nothing in this Agreement shall be construed to designate STL, or any of its employees or subcontractors, as employees, joint venturers or partners of Customer.

**SUBCONTRACTING.** STL shall have the right to subcontract any and all services, duties, and obligations hereunder, in whole or in part with the consent of the Customer in a timely response which shall not be unreasonably refused. Subcontractor shall be bound by the same Terms of performance as STL.

**BILLING.** All fees are charged or billed directly to the Customer. The billing of a third party will not be accepted without a statement, signed by the third party, which acknowledges and accepts payment responsibility.

**PAYMENT.** Payment in advance is required for all Customers except those whose credit has been established with STL. Customers with STL approved credit, terms are Net 30 days, after which time a 1-1/2% per month late charge is added to all unpaid balances. Failure of the Customer to pay according to Terms gives STL the right to withhold delivery of future data until all past due invoices have been settled. Customer shall pay all costs and expenses incident to the collection of past due amounts, including reasonable attorney's fees. No retainage of fees by the customer is allowed without the consent of STL.

**MODIFICATIONS.** If the sample received is of unknown character than in the original quote, or if due to the composition of the sample the original procedure specified is not practicable or likely to produce reliable results, Customer will be promptly notified. Modified procedures will be suggested and STL may quote new prices for such modifications. Upon agreement of such modification, the original quote shall be deemed amended and the samples in question shall be deemed to have been received.

**TIME OF PERFORMANCE.** STL will use its best efforts to comply with storage, processing and analytical time limits requested by the Customer. Unless specifically agreed to in writing between STL and Customer, the time performance of any testing or other services performed by STL under this agreement is not guaranteed and STL shall have no liability for failure to perform such services within the time requested. Quick turnaround times are available at a premium cost which will be defined in the quote, providing STL workload availability.

**LIMITATION OF DAMAGES.** STL is not an insurer of services rendered and the payments mentioned are based solely on the value of the services provided pursuant to this agreement. STL's liability to the Customer and the Customer's exclusive remedy for any cause of action alleged against STL, whether based in contract, tort, or otherwise, shall be limited solely to the amount paid by the Customer for the services performed. In no event shall STL be liable for incidental or consequential damages including, without limitation, business interruption, loss of use, or loss of profits incurred by the Customer, its subsidiaries, affiliates, successors or assigns, arising out of or related to this agreement or the performance of services hereunder.

**WARRANTY.** STL makes no warranty or representation, express or implied, or guarantee of results from the performance of services pursuant to this Agreement. Any information, recommendation, interpretation, or opinion by STL is

based upon inferences and assumptions which are subject to error, and with respect to which analysis may differ. Accordingly, STL does not assume any liability with respect to the use of, or for damages resulting from the use of, any information, data, test results, analysis, apparatus, method, or process disclosed by STL. STL makes no presentation or warranty of any kind, including but not limited to, the warranties of fitness for a particular purpose or merchantability, nor are any such warranties to be implied with respect to the data or service furnished. STL assumes no responsibility with respect to Customer's use thereof.

**LIMITATION ACTION.** No action, regardless of form, arising out of or brought in connection with any services provided under this Agreement may be brought by the Customer more than one year after the performance of said services by STL. It is expressly agreed that STL shall have no liability to Customer unless that liability arises out of the willful misconduct or gross negligence of STL or its duly authorized employees.

**CONFIDENTIALITY.** Data and the sample materials provided by Customer or at Customer's request and the result obtained by STL shall be held in confidence (unless such information is generally available to the public or is in the public domain or Customer has failed to pay STL for all services rendered or is otherwise in breach of this Agreement) subject to any disclosure required by law or legal process. STL's reports and the data and information provided therein are for the exclusive use and benefit of Customer and Customer agrees there shall be no third party beneficiary of such reports, data, or information. Customer will not disclose to any third party any information concerning STL's technical information, software programs, or other formulations.

**SEVERABILITY.** The provisions of this Agreement shall be severable, and if any clause, sentence, paragraph, provision or other part hereof shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder hereof, which remainder shall continue in full force and effect.

**WAIVER.** No waiver by either party of any breach, default or violation of any term, warranty, representation, agreement, covenant, condition or provision hereof shall constitute a waiver of any subsequent breach, default or violation of the same or any other term, warranty, representation, agreement, covenant, condition or provision hereof. All waivers must be in writing.

**FORCE MAJEURE.** Obligation of either party under this Agreement shall be suspended, and such party shall not be liable for damages or other remedies while such party is prevented from complying therewith, in whole or in part, due to contingencies beyond its reasonable control, including, but not limited to, strikes, riots, war, fire, act of God, injunction, compliance with any law, regulation or order, whether valid or invalid, of the United States of America or any other governmental body or any instrumentality, matrix interference or unknown highly contaminated samples that impact instrument operations thereof, whether now existing or hereafter created, inability to secure materials or obtain necessary permits, provided, however, the party so prevented from complying with its obligations hereunder shall promptly notify the other party thereof.

**LITIGATION.** All costs associated with compliance to any subpoena for documents, for testimony in court of law, or for any other purpose relating to work performed by STL, in connection with work performed for the Customer, shall be paid by the Customer. Such costs shall include, but are not limited to, hourly charges for persons involved in responding to subpoenas, travel and accommodations, mileage, attorney's preparation of testifier and advice of counsel in connection with response to subpoenas, and all other expenses deemed reasonable and associated with said litigation.

**HAZARDOUS WASTE.** Unused portions of samples found or suspected to be hazardous according to state or federal guidelines may be returned to the Customer upon completion of the analytical work. The cost of returning the sample may be invoiced to the Customer. The sample portions thereof remain the property of the Customer at all times. All radioactive or dioxin containing samples will be returned to the sampling site or to the Customer at the Customer's expense.

**RETENTION OF SAMPLES.** All routine samples are retained in our storage facilities for 30 days after report generation unless prior arrangements have been made. Samples may be held longer per Customers request for an additional fee.

**RETENTION OF REPORTS.** STL shall retain copies of analytical reports for a period of 5 years after report date, after which such reports may be destroyed or returned to the Customer at Customers expense. If Customer requests additional copies of such analytical reports during the retention period, an additional charge will apply for the preparation and printing of such reports.

**COMPLIANCE WITH LAW.** In the performance of all services to be provided hereunder, STL and Customer agree to comply with all applicable Federal, State and local laws and ordinances and all lawful orders, rules and regulations of any constituted authority.

**APPLICABLE LAW.** The validity, performance and construction of this Agreement shall be governed by and construed in accordance with the laws of the State of Delaware.



## **EXECUTIVE SUMMARY - Detection Highlights**

**E1A220190**

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
<b>I-34-5' 01/22/01 07:50 003</b>				
Mercury	0.048 B	0.10	mg/kg	SW846 7471A
Aluminum	24100	20.0	mg/kg	SW846 6010B
Arsenic	3.4	1.0	mg/kg	SW846 6010B
Barium	108	2.0	mg/kg	SW846 6010B
Chromium	28.3	1.0	mg/kg	SW846 6010B
Beryllium	0.73	0.50	mg/kg	SW846 6010B
Lead	6.0	0.50	mg/kg	SW846 6010B
Cobalt	9.3	5.0	mg/kg	SW846 6010B
Copper	23.6	2.5	mg/kg	SW846 6010B
Molybdenum	0.69 B	4.0	mg/kg	SW846 6010B
Nickel	20.0	4.0	mg/kg	SW846 6010B
Vanadium	57.9	5.0	mg/kg	SW846 6010B
Zinc	68.5	2.0	mg/kg	SW846 6010B
<b>I-34-W 01/22/01 10:00 007</b>				
Chloroform	53 J	250	ug/L	SW846 8260B
Trichloroethene	12000	250	ug/L	SW846 8260B

**000004**

## METHODS SUMMARY

E1A220190

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Extractable Petroleum Hydrocarbons	SW846 8015B	SANA AUTO-SHAKE
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Volatile Organics by GC/MS	SW846 8260B	SW846 5030
Volatile Organics by GC/MS	SW846 8260B	SW846 5030B/826
Volatile Petroleum Hydrocarbons	SW846 8015B	SW846 5030

**References:**

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

**000005**

## SAMPLE SUMMARY

E1A220190

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
DT1A5	003	I-34-5'	01/22/01	07:50
DT1A9	007	I-34-W	01/22/01	10:00

**NOTE (S) :**

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

000006

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-5'

## GC Semivolatiles

Lot-Sample #....: E1A220190-003 Work Order #....: DT1A51AC Matrix.....: SOLID  
 Date Sampled....: 01/22/01 07:50 Date Received...: 01/22/01 17:00 MS Run #.....: 1024195  
 Prep Date.....: 01/24/01 Analysis Date...: 01/25/01  
 Prep Batch #....: 1024407 Analysis Time...: 07:49  
 Dilution Factor: 1  
 Analyst ID.....: 356074 Instrument ID...: G03  
 Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
C8-C9	ND	10	mg/kg	5.0
C10-C11	ND	10	mg/kg	5.0
C12-C13	ND	10	mg/kg	5.0
C14-C15	ND	10	mg/kg	5.0
C16-C17	ND	10	mg/kg	5.0
C18-C19	ND	10	mg/kg	5.0
C20-C23	ND	10	mg/kg	5.0
C24-C27	ND	10	mg/kg	5.0
C28-C31	ND	10	mg/kg	5.0
C32-C35	ND	10	mg/kg	5.0
C36-C39	ND	10	mg/kg	5.0
C40+	ND	10	mg/kg	5.0
Total Carbon Chain Range	ND	10	mg/kg	5.0
<u>SURROGATE</u>		<u>PERCENT</u>	<u>RECOVERY</u>	
Benzo (a) pyrene		100	LIMITS (60 - 130)	

000007

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-5'

## GC Volatiles

Lot-Sample #....: E1A220190-003 Work Order #....: DT1A51AD Matrix.....: SOLID  
 Date Sampled....: 01/22/01 07:50 Date Received...: 01/22/01 17:00 MS Run #.....: 1026127  
 Prep Date.....: 01/25/01 Analysis Date...: 01/25/01  
 Prep Batch #....: 1026299 Analysis Time...: 12:52  
 Dilution Factor: 1  
 Analyst ID.....: 001464 Instrument ID...: G16  
 Method.....: SW846 8015B

<u>PARAMETER</u>	<u>REPORTING</u>			
	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
C6-C8	ND	1.0	mg/kg	0.10
<u>SURROGATE</u>				
a,a,a-Trifluorotoluene (TFT)	PERCENT	RECOVERY		
	RECOVERY	LIMITS		
	78	(60 - 130)		

000008

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-5'

## GC/MS Volatiles

Lot-Sample #....: E1A220190-003    Work Order #....: DT1A51AA    Matrix.....: SOLID  
 Date Sampled....: 01/22/01 07:50    Date Received...: 01/22/01 17:00    MS Run #.....: 1027040  
 Prep Date.....: 01/26/01    Analysis Date...: 01/26/01  
 Prep Batch #....: 1027135    Analysis Time..: 16:20  
 Dilution Factor: 1  
 Analyst ID.....: 015590    Instrument ID...: MSG  
 Method.....: SW846 8260B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND	10	ug/kg	2.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND	10	ug/kg	5.0
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	2.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND	50	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND	20	ug/kg	10
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropene	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0

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## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-5'

## GC/MS Volatiles

Lot-Sample #....: E1A220190-003 Work Order #....: DT1A51AA Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	5.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro- propane	ND	10	ug/kg	3.0
1,2,4-Trichloro- benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	RECOVERY		
		<u>LIMITS</u>		
Bromofluorobenzene	101	(70 - 130)		
1,2-Dichloroethane-d4	87	(60 - 140)		
Toluene-d8	89	(70 - 130)		

000010

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-W

## GC/MS Volatiles

Lot-Sample #....: E1A220190-007    Work Order #....: DT1A91AA    Matrix.....: WATER  
 Date Sampled....: 01/22/01 10:00    Date Received...: 01/22/01 17:00    MS Run #.....: 1026093  
 Prep Date.....: 01/26/01    Analysis Date...: 01/26/01  
 Prep Batch #....: 1026221    Analysis Time...: 07:16  
 Dilution Factor: 250  
 Analyst ID.....: 004648    Instrument ID...: MSC  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	2500	ug/L	750
Benzene	ND	250	ug/L	75
Bromobenzene	ND	250	ug/L	75
Bromochloromethane	ND	250	ug/L	75
Bromoform	ND	250	ug/L	75
Bromomethane	ND	500	ug/L	250
Carbon tetrachloride	ND	120	ug/L	75
2-Butanone	ND	1200	ug/L	750
n-Butylbenzene	ND	250	ug/L	75
sec-Butylbenzene	ND	250	ug/L	75
tert-Butylbenzene	ND	250	ug/L	50
Carbon disulfide	ND	250	ug/L	75
Chlorobenzene	ND	250	ug/L	75
Dibromochloromethane	ND	250	ug/L	75
Dichlorodifluoromethane	ND	250	ug/L	100
Bromodichloromethane	ND	250	ug/L	75
1,2-Dichloroethane	ND	120	ug/L	50
Chloroethane	ND	500	ug/L	75
Chloroform	53 J	250	ug/L	50
Chloromethane	ND	500	ug/L	75
2-Chlorotoluene	ND	250	ug/L	75
4-Chlorotoluene	ND	250	ug/L	75
1,2-Dibromo-3-chloro-	ND	500	ug/L	150
propane				
1,2-Dibromoethane	ND	250	ug/L	75
Iodomethane	ND	500	ug/L	250
1,2-Dichlorobenzene	ND	250	ug/L	50
1,3-Dichlorobenzene	ND	250	ug/L	50
1,4-Dichlorobenzene	ND	250	ug/L	75
1,1-Dichloroethane	ND	250	ug/L	50
cis-1,2-Dichloroethene	ND	250	ug/L	75
trans-1,2-Dichloroethene	ND	250	ug/L	50
Vinyl chloride	ND	120	ug/L	75
2,2-Dichloropropane	ND	250	ug/L	75
1,1-Dichloropropene	ND	250	ug/L	75
Ethylbenzene	ND	250	ug/L	50
Hexachlorobutadiene	ND	250	ug/L	75

(Continued on next page)

**000011**

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-W

## GC/MS Volatiles

Lot-Sample #...: E1A220190-007 Work Order #...: DT1A91AA Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
2-Hexanone	ND	1200	ug/L	500
Isopropylbenzene	ND	250	ug/L	50
p-Isopropyltoluene	ND	250	ug/L	50
Methylene chloride	ND	250	ug/L	50
4-Methyl-2-pentanone	ND	1200	ug/L	500
Methyl tert-butyl ether	ND	250	ug/L	120
n-Propylbenzene	ND	250	ug/L	100
Styrene	ND	250	ug/L	75
1,1,1,2-Tetrachloroethane	ND	250	ug/L	75
1,1,2,2-Tetrachloroethane	ND	250	ug/L	75
Tetrachloroethene	ND	250	ug/L	180
Toluene	ND	250	ug/L	75
1,2,3-Trichlorobenzene	ND	250	ug/L	100
1,2,4-Trichloro- benzene	ND	250	ug/L	75
1,1,1-Trichloroethane	ND	250	ug/L	50
1,1,2-Trichloroethane	ND	250	ug/L	75
Trichloroethene	12000	250	ug/L	75
Trichlorofluoromethane	ND	500	ug/L	50
1,2,3-Trichloropropane	ND	250	ug/L	75
1,1,2-Trichlorotrifluoro- ethane	ND	250	ug/L	50
1,2,4-Trimethylbenzene	ND	250	ug/L	50
1,3,5-Trimethylbenzene	ND	250	ug/L	50
Xylenes (total)	ND	250	ug/L	120
Acrolein	ND	5000	ug/L	3000
Acrylonitrile	ND	5000	ug/L	2500
Vinyl acetate	ND	1200	ug/L	250
Tetrahydrofuran	ND	2500	ug/L	500
2-Chloroethyl vinyl ether	ND	1200	ug/L	500
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Bromofluorobenzene	96		(75 - 120)	
1,2-Dichloroethane-d4	104		(65 - 130)	
Toluene-d8	101		(80 - 130)	

NOTE(S) :

J Estimated result. Result is less than RL.

000012

KENNEDY/JENKS CONSULTANTS

I-34-5'

GC/MS Volatiles

Lot-Sample #: E1A220190-003      Work Order #: DT1A51AA      Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	RESULT	ESTIMATED	RETENTION	UNITS
			M	TIME	

NOTE (S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

**000013**

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-5'

## TOTAL Metals

Lot-Sample #....: E1A220190-003                                  Matrix.....: SOLID  
 Date Sampled...: 01/22/01 07:50    Date Received..: 01/22/01 17:00

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #....:	1024461					
Aluminum	24100	20.0	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AE
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	003119
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	8.0
Arsenic	3.4	1.0	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AF
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.40
Antimony	ND	6.0	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AG
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.20
Barium	108	2.0	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AH
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.10
Cadmium	ND	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AJ
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.050
Chromium	28.3	1.0	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AK
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.10
Beryllium	0.73	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AL
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.050
Lead	6.0	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AM
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.30
Selenium	ND	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT1A51AN
		Dilution Factor: 1		Analysis Time...: 02:03	Analyst ID.....:	0031193
		Instrument ID...: M01		MS Run #.....: 1024213	MDL.....:	0.40

(Continued on next page)

**000014**

## KENNEDY/JENKS CONSULTANTS

Client Sample ID: I-34-5'

## TOTAL Metals

Lot-Sample #....: E1A220190-003

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK	ANALYSIS DATE	ORDER #
		LIMIT	UNITS						
Silver	ND	1.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AP
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.10
Cobalt	9.3	5.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AQ
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.10
Copper	23.6	2.5	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AR
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.40
Molybdenum	0.69 B	4.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AT
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.30
Nickel	20.0	4.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AU
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.30
Thallium	ND	1.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AV
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.50
Vanadium	57.9	5.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AW
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 0.10
Zinc	68.5	2.0	mg/kg		SW846 6010B			01/25-01/27/01	DT1A51AX
		Dilution Factor: 1				Analysis Time..: 02:03			Analyst ID.....: 0031193
		Instrument ID...: M01				MS Run #.....: 1024213			MDL.....: 1.0
Prep Batch #....: 1024466									
Mercury	0.048 B	0.10	mg/kg		SW846 7471A			01/27-01/30/01	DT1A51AO
		Dilution Factor: 1				Analysis Time..: 12:04			Analyst ID.....: 0210883
		Instrument ID...: M04				MS Run #.....: 1024215			MDL.....: 0.020

## NOTE(S) :

B Estimated result. Result is less than RL.

000015

# QC DATA ASSOCIATION SUMMARY

E1A220190

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
003	SOLID	SW846 8015B		1024407	1024195
	SOLID	SW846 8015B		1026299	1026127
	SOLID	SW846 7471A		1024466	1024215
	SOLID	SW846 8260B		1027135	1027040
		SW846 6010B		1024461	1024213
007	WATER	SW846 8260B		1026221	1026093

000016

KENNEDY/JENKS CONSULTANTS

Method Blank Report

GC/MS Volatiles

Lot-Sample #: E1A270000-135 B Work Order #: DT8761AA Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

000017

BOE-C6-0153396

**METHOD BLANK REPORT**

**GC Semivolatiles**

**Client Lot #....:** E1A220190  
**MB Lot-Sample #:** E1A240000-407  
**Analysis Date..:** 01/25/01  
**Dilution Factor:** 1

**Work Order #....:** DT38H1AA  
**Prep Date.....:** 01/24/01  
**Prep Batch #....:** 1024407  
**Analyst ID.....:** 356074

**Matrix.....:** SOLID  
**Analysis Time..:** 06:31  
**Instrument ID..:** G03

<b>PARAMETER</b>	<b>RESULT</b>	<b>REPORTING</b>		
		<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>
C8-C9	ND	10	mg/kg	SW846 8015B
C10-C11	ND	10	mg/kg	SW846 8015B
C12-C13	ND	10	mg/kg	SW846 8015B
C14-C15	ND	10	mg/kg	SW846 8015B
C16-C17	ND	10	mg/kg	SW846 8015B
C18-C19	ND	10	mg/kg	SW846 8015B
C20-C23	ND	10	mg/kg	SW846 8015B
C24-C27	ND	10	mg/kg	SW846 8015B
C28-C31	ND	10	mg/kg	SW846 8015B
C32-C35	ND	10	mg/kg	SW846 8015B
C36-C39	ND	10	mg/kg	SW846 8015B
C40+	ND	10	mg/kg	SW846 8015B
Total Carbon Chain Range	ND	10	mg/kg	SW846 8015B
<b>SURROGATE</b>	<b>PERCENT</b>	<b>RECOVERY</b>		
		<b>RECOVERY</b>	<b>LIMITS</b>	
Benzo(a)pyrene	106		(60 - 130)	

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**000018**

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #....: E1A220190  
 MB Lot-Sample #: E1A260000-221

Analysis Date...: 01/25/01  
 Dilution Factor: 1

Work Order #....: DT7AL1AA

Prep Date.....: 01/25/01  
 Prep Batch #: 1026221

Matrix.....: WATER

Analysis Time..: 20:43  
 Instrument ID..: MSC

Analyst ID.....: 004648

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	0.50	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	0.50	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Iodomethane	ND	2.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	0.50	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B

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000019

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: E1A220190

Work Order #...: DT7AL1AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Vinyl acetate	ND	5.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	5.0	ug/L	SW846 8260B
<u>SURROGATE</u>		<u>PERCENT</u>	<u>RECOVERY</u>	
		<u>RECOVERY</u>	<u>LIMITS</u>	
Bromofluorobenzene	92		(75 - 120)	
1,2-Dichloroethane-d4	98		(65 - 130)	
Toluene-d8	97		(80 - 130)	

## NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000020

**METHOD BLANK REPORT**

**GC Volatiles**

**Client Lot #....:** E1A220190  
**MB Lot-Sample #:** E1A260000-299  
**Analysis Date..:** 01/25/01  
**Dilution Factor:** 1

**Work Order #....:** DT7JK1AA  
**Prep Date.....:** 01/25/01  
**Prep Batch #....:** 1026299  
**Analyst ID.....:** 001464

**Matrix.....:** SOLID  
**Analysis Time..:** 12:23  
**Instrument ID..:** G16

<b>PARAMETER</b>	<b>RESULT</b>	<b>REPORTING</b>		
		<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>
C6-C8	ND	1.0	mg/kg	SW846 8015B
<b>SURROGATE</b>				
a,a,a-Trifluorotoluene (TFT)	PERCENT RECOVERY 77	RECOVERY LIMITS (60 - 130)		

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**000021**

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #....: E1A220190  
MB Lot-Sample #: E1A270000-135  
Analysis Date...: 01/26/01  
Dilution Factor: 1

Work Order #....: DT8761AA

Matrix.....: SOLID

Prep Date.....: 01/26/01  
Prep Batch #....: 1027135

Analysis Time...: 09:02  
Instrument ID...: MSG

Analyst ID.....: 015590

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	10	ug/kg	SW846 8260B
Chloromethane	ND	10	ug/kg	SW846 8260B
Vinyl chloride	ND	10	ug/kg	SW846 8260B
Bromomethane	ND	10	ug/kg	SW846 8260B
Chloroethane	ND	10	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	10	ug/kg	SW846 8260B
Acrolein	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8260B
Iodomethane	ND	10	ug/kg	SW846 8260B
Acetone	ND	25	ug/kg	SW846 8260B
Carbon disulfide	ND	5.0	ug/kg	SW846 8260B
Methylene chloride	ND	5.0	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8260B
Acrylonitrile	ND	50	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
Vinyl acetate	ND	10	ug/kg	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260B
cis-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8260B
2-Butanone	ND	25	ug/kg	SW846 8260B
Bromochloromethane	ND	5.0	ug/kg	SW846 8260B
Chloroform	ND	5.0	ug/kg	SW846 8260B
Tetrahydrofuran	ND	20	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/kg	SW846 8260B
1,1-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260B
Benzene	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
Trichloroethene	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260B
Bromodichloromethane	ND	5.0	ug/kg	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	25	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/kg	SW846 8260B
Tetrachloroethene	ND	5.0	ug/kg	SW846 8260B
2-Hexanone	ND	25	ug/kg	SW846 8260B
Dibromochloromethane	ND	5.0	ug/kg	SW846 8260B

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000022

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #....: E1A220190

Work Order #....: DT8761AA

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
1,2-Dibromoethane	ND	5.0	ug/kg	SW846 8260B
Chlorobenzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Xylenes (total)	ND	5.0	ug/kg	SW846 8260B
Styrene	ND	10	ug/kg	SW846 8260B
Bromoform	ND	5.0	ug/kg	SW846 8260B
Isopropylbenzene	ND	5.0	ug/kg	SW846 8260B
p-Isopropyltoluene	ND	5.0	ug/kg	SW846 8260B
Bromobenzene	ND	5.0	ug/kg	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260B
1,2,3-Trichloropropane	ND	5.0	ug/kg	SW846 8260B
n-Propylbenzene	ND	5.0	ug/kg	SW846 8260B
2-Chlorotoluene	ND	5.0	ug/kg	SW846 8260B
4-Chlorotoluene	ND	5.0	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	SW846 8260B
tert-Butylbenzene	ND	5.0	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	SW846 8260B
sec-Butylbenzene	ND	5.0	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	5.0	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	5.0	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	5.0	ug/kg	SW846 8260B
n-Butylbenzene	ND	5.0	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	SW846 8260B
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	SW846 8260B
Hexachlorobutadiene	ND	5.0	ug/kg	SW846 8260B
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	SW846 8260B
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	RECOVERY		
		<u>LIMITS</u>		
Bromofluorobenzene	102	(70 - 130)		
1,2-Dichloroethane-d4	83	(60 - 140)		
Toluene-d8	93	(70 - 130)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000023

## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #....: E1A220190

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>MB Lot-Sample #: E1A240000-461 Prep Batch #....: 1024461</b>						
Aluminum	ND	20.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AA
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Arsenic	ND	1.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AC
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Antimony	ND	6.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AD
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Barium	ND	2.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AE
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Cadmium	ND	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AF
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Chromium	ND	1.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AG
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Beryllium	ND	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AH
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Lead	ND	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AJ
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Selenium	ND	0.50	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AK
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Silver	ND	1.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AL
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	
Cobalt	ND	5.0	mg/kg	SW846 6010B	01/25-01/27/01	DT4H01AM
		Dilution Factor: 1				
		Analysis Time...: 01:49		Analyst ID.....: 003119	Instrument ID...: M01	

(Continued on next page)

000024

## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #....: E1A220190

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK	ORDER #
		LIMIT	UNITS					
Copper	ND	2.5	mg/kg		SW846 6010B	01/25-01/27/01		DT4H01AN
		Dilution Factor: 1						
		Analysis Time...: 01:49			Analyst ID.....: 003119		Instrument ID...: M01	
Molybdenum	ND	4.0	mg/kg		SW846 6010B	01/25-01/27/01		DT4H01AP
		Dilution Factor: 1						
		Analysis Time...: 01:49			Analyst ID.....: 003119		Instrument ID...: M01	
Nickel	ND	4.0	mg/kg		SW846 6010B	01/25-01/27/01		DT4H01AQ
		Dilution Factor: 1						
		Analysis Time...: 01:49			Analyst ID.....: 003119		Instrument ID...: M01	
Thallium	ND	1.0	mg/kg		SW846 6010B	01/25-01/27/01		DT4H01AR
		Dilution Factor: 1						
		Analysis Time...: 01:49			Analyst ID.....: 003119		Instrument ID...: M01	
Vanadium	ND	5.0	mg/kg		SW846 6010B	01/25-01/27/01		DT4H01AT
		Dilution Factor: 1						
		Analysis Time...: 01:49			Analyst ID.....: 003119		Instrument ID...: M01	
Zinc	ND	2.0	mg/kg		SW846 6010B	01/25-01/27/01		DT4H01AU
		Dilution Factor: 1						
		Analysis Time...: 01:49			Analyst ID.....: 003119		Instrument ID...: M01	

MB Lot-Sample #: E1A240000-466 Prep Batch #....: 1024466

Mercury	ND	0.10	mg/kg	SW846 7471A	01/27-01/30/01	DT4H21AA
		Dilution Factor: 1				
		Analysis Time...: 12:00		Analyst ID.....: 021088		Instrument ID...: M04

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000025

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC Semivolatiles

**Client Lot #....:** E1A220190      **Work Order #....:** DT38H1AC      **Matrix.....:** SOLID  
**LCS Lot-Sample#:** E1A240000-407  
**Prep Date.....:** 01/24/01      **Analysis Date...:** 01/25/01  
**Prep Batch #....:** 1024407      **Analysis Time...:** 07:10  
**Dilution Factor:** 1      **Instrument ID...:** G03  
**Analyst ID.....:** 356074

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>PERCENT</u> <u>RECOVERY</u> <u>UNITS</u> <u>mg/kg</u>	<u>METHOD</u>
<b>TPH (as Diesel)</b>	<b>250</b>	<b>246</b>	<b>99</b>	<b>SW846 8015B</b>
<b>SURROGATE</b>			<b>PERCENT</b> <b>RECOVERY</b> <b>LIMITS</b>	
Benzo(a)pyrene		110	(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000026

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

**Client Lot #....:** E1A220190      **Work Order #....:** DT7AL1AC      **Matrix.....:** WATER  
**LCS Lot-Sample#:** E1A260000-221  
**Prep Date.....:** 01/25/01      **Analysis Date...:** 01/25/01  
**Prep Batch #....:** 1026221      **Analysis Time...:** 20:13  
**Dilution Factor:** 1      **Instrument ID...:** MSC  
**Analyst ID.....:** 004648

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>	<u>PERCENT</u>	
	<u>AMOUNT</u>	<u>AMOUNT</u>	<u>RECOVERY</u>	<u>METHOD</u>
Benzene	10.0	9.21	ug/L	92 SW846 8260B
1,1-Dichloroethene	10.0	10.2	ug/L	102 SW846 8260B
Chlorobenzene	10.0	9.30	ug/L	93 SW846 8260B
Toluene	10.0	9.04	ug/L	90 SW846 8260B
Trichloroethene	10.0	9.99	ug/L	100 SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	95	(75 - 120)
1,2-Dichloroethane-d4	100	(65 - 130)
Toluene-d8	101	(80 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000027

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC Volatiles

**Client Lot #....:** E1A220190    **Work Order #....:** DT7JK1AC    **Matrix.....:** SOLID  
**LCS Lot-Sample#:** E1A260000-299  
**Prep Date.....:** 01/25/01    **Analysis Date...:** 01/25/01  
**Prep Batch #....:** 1026299    **Analysis Time...:** 11:55  
**Dilution Factor:** 1    **Instrument ID...:** G16  
**Analyst ID.....:** 001464

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
<b>TPH (as Gasoline)</b>	<b>5.00</b>	<b>5.12</b>	<b>mg/kg</b>	<b>102</b>	<b>SW846 8015B</b>
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>		<u>RECOVERY LIMITS</u>	
a,a,a-Trifluorotoluene (TFT)		106		(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000028

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: E1A220190      Work Order #....: DT8761AC      Matrix.....: SOLID  
 LCS Lot-Sample#: E1A270000-135  
 Prep Date.....: 01/26/01      Analysis Date...: 01/26/01  
 Prep Batch #....: 1027135      Analysis Time...: 08:29  
 Dilution Factor: 1      Instrument ID...: MSG  
 Analyst ID.....: 015590

<u>PARAMETER</u>	SPIKE <u>AMOUNT</u>	MEASURED <u>AMOUNT</u>	UNITS	PERCENT <u>RECOVERY</u>	METHOD
1,1-Dichloroethene	50.0	47.8	ug/kg	96	SW846 8260B
Benzene	50.0	49.4	ug/kg	99	SW846 8260B
Trichloroethene	50.0	49.9	ug/kg	100	SW846 8260B
Toluene	50.0	48.9	ug/kg	98	SW846 8260B
Chlorobenzene	50.0	48.6	ug/kg	97	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Bromofluorobenzene	98	(70 - 130)
1,2-Dichloroethane-d4	79	(60 - 140)
Toluene-d8	94	(70 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000029

**LABORATORY CONTROL SAMPLE DATA REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION-ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>LCS Lot-Sample#:</b> E1A240000-461 <b>Prep Batch #....:</b> 1024461							
Aluminum	200	189	mg/kg	95	SW846 6010B	01/25-01/27/01	DT4H01AV
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Arsenic	200	197	mg/kg	98	SW846 6010B	01/25-01/27/01	DT4H01AW
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Antimony	50.0	47.9	mg/kg	96	SW846 6010B	01/25-01/27/01	DT4H01AX
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Barium	200	197	mg/kg	99	SW846 6010B	01/25-01/27/01	DT4H01A0
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Cadmium	5.00	5.31	mg/kg	106	SW846 6010B	01/25-01/27/01	DT4H01A1
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Chromium	20.0	21.3	mg/kg	106	SW846 6010B	01/25-01/27/01	DT4H01A2
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Beryllium	5.00	5.46	mg/kg	109	SW846 6010B	01/25-01/27/01	DT4H01A3
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Lead	50.0	49.7	mg/kg	99	SW846 6010B	01/25-01/27/01	DT4H01A4
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Selenium	200	188	mg/kg	94	SW846 6010B	01/25-01/27/01	DT4H01A5
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	
Silver	5.00	4.93	mg/kg	99	SW846 6010B	01/25-01/27/01	DT4H01A6
			Dilution Factor:	1			
			Analysis Time..:	01:55	Analyst ID.....: 003119	Instrument ID..: M01	

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**000030**

**LABORATORY CONTROL SAMPLE DATA REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

PARAMETER	SPIKE	MEASURED	UNITS	PERCNT		METHOD	PREPARATION-	WORK
	AMOUNT	AMOUNT		RECVRY	METHOD		ANALYSIS DATE	ORDER #
Cobalt	50.0	53.0	mg/kg	106	SW846	6010B	01/25-01/27/01	DT4H01A7
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
Copper	25.0	25.0	mg/kg	100	SW846	6010B	01/25-01/27/01	DT4H01A8
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
Molybdenum	100	101	mg/kg	101	SW846	6010B	01/25-01/27/01	DT4H01A9
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
Nickel	50.0	52.7	mg/kg	105	SW846	6010B	01/25-01/27/01	DT4H01CA
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
Thallium	200	202	mg/kg	101	SW846	6010B	01/25-01/27/01	DT4H01CC
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
Vanadium	50.0	51.6	mg/kg	103	SW846	6010B	01/25-01/27/01	DT4H01CD
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
Zinc	50.0	51.4	mg/kg	103	SW846	6010B	01/25-01/27/01	DT4H01CE
			Dilution Factor: 1					
			Analysis Time...: 01:55			Analyst ID.....: 003119		Instrument ID..: M01
<b>LCS Lot-Sample#:</b>	<b>E1A240000-466</b>		<b>Prep Batch #....:</b>	<b>1024466</b>				
Mercury	0.833	0.864	mg/kg	104	SW846	7471A	01/27-01/30/01	DT4H21AC
			Dilution Factor: 1					
			Analysis Time...: 12:02			Analyst ID.....: 021088		Instrument ID..: M04

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**000031**

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: E1A220190      Work Order #....: DT38H1AC      Matrix.....: SOLID  
LCS Lot-Sample#: E1A240000-407  
Prep Date.....: 01/24/01      Analysis Date...: 01/25/01  
Prep Batch #....: 1024407      Analysis Time...: 07:10  
Dilution Factor: 1      Instrument ID...: G03  
Analyst ID.....: 356074

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
TPH (as Diesel)	99	(60 - 130)	SW846 8015B
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
Benzo (a) pyrene	110	(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000032

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #....: E1A220190      Work Order #....: DT7AL1AC      Matrix.....: WATER  
 LCS Lot-Sample#: E1A260000-221  
 Prep Date.....: 01/25/01      Analysis Date...: 01/25/01  
 Prep Batch #....: 1026221      Analysis Time...: 20:13  
 Dilution Factor: 1      Instrument ID...: MSC  
 Analyst ID.....: 004648

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
Benzene	92	(75 - 120)	<b>SW846 8260B</b>
1,1-Dichloroethene	102	(70 - 130)	<b>SW846 8260B</b>
Chlorobenzene	93	(80 - 120)	<b>SW846 8260B</b>
Toluene	90	(80 - 120)	<b>SW846 8260B</b>
Trichloroethene	100	(75 - 130)	<b>SW846 8260B</b>

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
Bromofluorobenzene	95	(75 - 120)
1,2-Dichloroethane-d4	100	(65 - 130)
Toluene-d8	101	(80 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000033

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #....: E1A220190      Work Order #....: DT7JK1AC      Matrix.....: SOLID  
LCS Lot-Sample#: E1A260000-299  
Prep Date.....: 01/25/01      Analysis Date...: 01/25/01  
Prep Batch #....: 1026299      Analysis Time...: 11:55  
Dilution Factor: 1      Instrument ID...: G16  
Analyst ID.....: 001464

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
<u>TPH (as Gasoline)</u>	<u>102</u>	(80 - 140)	<u>SW846 8015B</u>
<u>SURROGATE</u>			

a,a,a-Trifluorotoluene  
(TFT)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
a,a,a-Trifluorotoluene (TFT)	106	(60 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000034

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #....: E1A220190      Work Order #....: DT8761AC      Matrix.....: SOLID  
 LCS Lot-Sample#: E1A270000-135  
 Prep Date.....: 01/26/01      Analysis Date...: 01/26/01  
 Prep Batch #....: 1027135      Analysis Time...: 08:29  
 Dilution Factor: 1      Instrument ID...: MSG  
 Analyst ID.....: 015590

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
1,1-Dichloroethene	96	(60 - 150)	<b>SW846</b> 8260B
Benzene	99	(70 - 140)	<b>SW846</b> 8260B
Trichloroethene	100	(70 - 130)	<b>SW846</b> 8260B
Toluene	98	(70 - 130)	<b>SW846</b> 8260B
Chlorobenzene	97	(70 - 130)	<b>SW846</b> 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	98	(70 - 130)	
1,2-Dichloroethane-d4	79	(60 - 140)	
Toluene-d8	94	(70 - 130)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000035

**LABORATORY CONTROL SAMPLE EVALUATION REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#:	E1A240000-461	Prep Batch #....:	1024461		
Aluminum	95	(80 - 120)	SW846 6010B	01/25-01/27/01	DT4H01AV
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Arsenic	98	(75 - 115)	SW846 6010B	01/25-01/27/01	DT4H01AW
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Antimony	96	(75 - 115)	SW846 6010B	01/25-01/27/01	DT4H01AX
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Barium	99	(80 - 120)	SW846 6010B	01/25-01/27/01	DT4H01A0
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Cadmium	106	(80 - 120)	SW846 6010B	01/25-01/27/01	DT4H01A1
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Chromium	106	(85 - 120)	SW846 6010B	01/25-01/27/01	DT4H01A2
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Beryllium	109	(80 - 120)	SW846 6010B	01/25-01/27/01	DT4H01A3
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Lead	99	(80 - 120)	SW846 6010B	01/25-01/27/01	DT4H01A4
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Selenium	94	(70 - 115)	SW846 6010B	01/25-01/27/01	DT4H01A5
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	
Silver	99	(80 - 120)	SW846 6010B	01/25-01/27/01	DT4H01A6
		Dilution Factor: 1			
		Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01	

(Continued on next page)

**000036**

**LABORATORY CONTROL SAMPLE EVALUATION REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Cobalt	106	(80 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01A7
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
Copper	100	(80 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01A8
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
Molybdenum	101	(80 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01A9
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
Nickel	105	(80 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01CA
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
Thallium	101	(75 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01CC
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
Vanadium	103	(80 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01CD
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
Zinc	103	(80 - 120)	SW846 6010B	Dilution Factor: 1	01/25-01/27/01	DT4H01CE
				Analysis Time...: 01:55	Analyst ID.....: 003119	Instrument ID...: M01
<b>LCS Lot-Sample#:</b>	E1A240000-466	<b>Prep Batch #....:</b>	1024466			
Mercury	104	(85 - 115)	SW846 7471A	Dilution Factor: 1	01/27-01/30/01	DT4H21AC
				Analysis Time...: 12:02	Analyst ID.....: 021088	Instrument ID...: M04

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**000037**

**MATRIX SPIKE SAMPLE DATA REPORT**

**GC/MS Volatiles**

Client Lot #....: E1A220190      Work Order #....: DTVNQ1DD-MS      Matrix.....: SOLID  
 MS Lot-Sample #: E1A180314-001      DTVNQ1DE-MSD  
 Date Sampled...: 01/16/01 12:40 Date Received...: 01/18/01 17:00 MS Run #.....: 1027040  
 Prep Date.....: 01/26/01 Analysis Date...: 01/26/01  
 Prep Batch #....: 1027135 Analysis Time...: 12:58  
 Dilution Factor: 1 Analyst ID.....: 015590      Instrument ID..: MSG

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCENT		
	AMOUNT	AMT	AMOUNT		RECOVERY	RPD	METHOD
<b>1,1-Dichloroethene</b>	ND	50.0	47.6	ug/kg	95		<b>SW846 8260B</b>
	ND	50.0	43.8	ug/kg	88	8.2	<b>SW846 8260B</b>
<b>Benzene</b>	ND	50.0	47.7	ug/kg	95		<b>SW846 8260B</b>
	ND	50.0	44.2	ug/kg	88	7.5	<b>SW846 8260B</b>
<b>Trichloroethene</b>	ND	50.0	48.6	ug/kg	97		<b>SW846 8260B</b>
	ND	50.0	45.9	ug/kg	92	5.7	<b>SW846 8260B</b>
<b>Toluene</b>	ND	50.0	46.0	ug/kg	92		<b>SW846 8260B</b>
	ND	50.0	42.4	ug/kg	85	8.2	<b>SW846 8260B</b>
<b>Chlorobenzene</b>	ND	50.0	47.8	ug/kg	96		<b>SW846 8260B</b>
	ND	50.0	43.8	ug/kg	88	8.7	<b>SW846 8260B</b>

SURROGATE	PERCENT		LIMITS
	RECOVERY		
<b>3romofluorobenzene</b>	96		(70 - 130)
	101		(70 - 130)
<b>1,2-Dichloroethane-d4</b>	83		(60 - 140)
	88		(60 - 140)
<b>Toluene-d8</b>	90		(70 - 130)
	93		(70 - 130)

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

**000038**

**MATRIX SPIKE SAMPLE DATA REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

**Date Sampled...:** 01/22/01 07:50 **Date Received..:** 01/22/01 17:00

<u>SAMPLE PARAMETER</u>	<u>AMOUNT</u>	<u>SPIKE AMT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>MS Lot-Sample #:</b> E1A220190-003 <b>Prep Batch #....:</b> 1024461									
<b>Aluminum</b>									
24100	200	23800	NC	mg/kg			SW846 6010B	01/25-01/27/01	DT1A51A3
24100	200	26600	NC	mg/kg			SW846 6010B	01/25-01/27/01	DT1A51A4
Dilution Factor: 1									
Analysis Time...: 02:15									
MS Run #.....: 1024213									
<b>Arsenic</b>									
3.4	200	184		mg/kg	90		SW846 6010B	01/25-01/27/01	DT1A51A5
3.4	200	189		mg/kg	93	2.7	SW846 6010B	01/25-01/27/01	DT1A51A6
Dilution Factor: 1									
Analysis Time...: 02:15									
MS Run #.....: 1024213									
<b>Antimony</b>									
ND	50.0	17.9	N	mg/kg	36		SW846 6010B	01/25-01/27/01	DT1A51A7
ND	50.0	13.9	N	mg/kg	28	25	SW846 6010B	01/25-01/27/01	DT1A51A8
Dilution Factor: 1									
Analysis Time...: 02:15									
MS Run #.....: 1024213									
<b>Barium</b>									
108	200	288		mg/kg	90		SW846 6010B	01/25-01/27/01	DT1A51A9
108	200	307		mg/kg	99	6.5	SW846 6010B	01/25-01/27/01	DT1A51CA
Dilution Factor: 1									
Analysis Time...: 02:15									
MS Run #.....: 1024213									
<b>Cadmium</b>									
ND	5.00	5.03		mg/kg	101		SW846 6010B	01/25-01/27/01	DT1A51CC
ND	5.00	5.15		mg/kg	103	2.4	SW846 6010B	01/25-01/27/01	DT1A51CD
Dilution Factor: 1									
Analysis Time...: 02:15									
MS Run #.....: 1024213									
<b>Chromium</b>									
28.3	20.0	46.9		mg/kg	93		SW846 6010B	01/25-01/27/01	DT1A51CE
28.3	20.0	51.0		mg/kg	114	8.4	SW846 6010B	01/25-01/27/01	DT1A51CF
Dilution Factor: 1									
Analysis Time...: 02:15									
MS Run #.....: 1024213									

(Continued on next page)

**000039**

**MATRIX SPIKE SAMPLE DATA REPORT**

**TOTAL Metals**

Client Lot #....: E1A220190

**Matrix.....: SOLID**

Date Sampled...: 01/22/01 07:50 Date Received..: 01/22/01 17:00

PARAMETER	SAMPLE	SPIKE	MEASURED	UNITS	PERCNT			PREPARATION-	WORK	ORDER #
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	METHOD			
<b>Beryllium</b>										
	0.73	5.00	5.76	mg/kg	101		SW846 6010B	01/25-01/27/01	DT1A51CG	
	0.73	5.00	5.96	mg/kg	105	3.5	SW846 6010B	01/25-01/27/01	DT1A51CH	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									
<b>Lead</b>										
	6.0	50.0	51.8	mg/kg	91		SW846 6010B	01/25-01/27/01	DT1A51CJ	
	6.0	50.0	53.4	mg/kg	95	3.0	SW846 6010B	01/25-01/27/01	DT1A51CK	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									
<b>Selenium</b>										
	ND	200	173	mg/kg	86		SW846 6010B	01/25-01/27/01	DT1A51CL	
	ND	200	177	mg/kg	89	2.5	SW846 6010B	01/25-01/27/01	DT1A51CM	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									
<b>Silver</b>										
	ND	5.00	4.40	mg/kg	88		SW846 6010B	01/25-01/27/01	DT1A51CN	
	ND	5.00	4.51	mg/kg	90	2.5	SW846 6010B	01/25-01/27/01	DT1A51CP	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									
<b>Cobalt</b>										
	9.3	50.0	58.2	mg/kg	98		SW846 6010B	01/25-01/27/01	DT1A51CQ	
	9.3	50.0	59.3	mg/kg	100	1.9	SW846 6010B	01/25-01/27/01	DT1A51CR	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									
<b>Copper</b>										
	23.6	25.0	47.6	mg/kg	96		SW846 6010B	01/25-01/27/01	DT1A51CT	
	23.6	25.0	49.8	mg/kg	105	4.6	SW846 6010B	01/25-01/27/01	DT1A51CU	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									
<b>Molybdenum</b>										
	0.69	100	88.9	mg/kg	88		SW846 6010B	01/25-01/27/01	DT1A51CV	
	0.69	100	89.8	mg/kg	89	0.96	SW846 6010B	01/25-01/27/01	DT1A51CW	
	Dilution Factor: 1									
	Analysis Time...: 02:15									
	MS Run #.....: 1024213									

**000040**

**MATRIX SPIKE SAMPLE DATA REPORT**

**TOTAL Metals**

Client Lot #....: E1A220190

Matrix.....: SOLID

Date Sampled...: 01/22/01 07:50 Date Received..: 01/22/01 17:00

PARAMETER	SAMPLE	SPIKE	MEASURED	UNITS	PERCNT			METHOD	PREPARATION-	WORK	ORDER #
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	ANALYSIS DATE				
<b>Nickel</b>											
	20.0	50.0	67.0	mg/kg	94		SW846 6010B	01/25-01/27/01	DT1A51CX		
	20.0	50.0	70.0	mg/kg	100	4.4	SW846 6010B	01/25-01/27/01	DT1A51C0		
	Dilution Factor: 1										
	Analysis Time...: 02:15										
	MS Run #.....: 1024213										
<b>Thallium</b>											
	ND	200	190	mg/kg	95		SW846 6010B	01/25-01/27/01	DT1A51C1		
	ND	200	194	mg/kg	97	2.4	SW846 6010B	01/25-01/27/01	DT1A51C2		
	Dilution Factor: 1										
	Analysis Time...: 02:15										
	MS Run #.....: 1024213										
<b>Vanadium</b>											
	57.9	50.0	104	mg/kg	92		SW846 6010B	01/25-01/27/01	DT1A51C3		
	57.9	50.0	109	mg/kg	103	5.2	SW846 6010B	01/25-01/27/01	DT1A51C4		
	Dilution Factor: 1										
	Analysis Time...: 02:15										
	MS Run #.....: 1024213										
<b>Zinc</b>											
	68.5	50.0	116	mg/kg	95		SW846 6010B	01/25-01/27/01	DT1A51C5		
	68.5	50.0	122	mg/kg	107	4.8	SW846 6010B	01/25-01/27/01	DT1A51C6		
	Dilution Factor: 1										
	Analysis Time...: 02:15										
	MS Run #.....: 1024213										

**MS Lot-Sample #:** E1A220190-003 **Prep Batch #....:** 1024466

**Mercury**

0.048	0.167	0.197	mg/kg	89		SW846 7471A	01/27-01/30/01	DT1A51C7
0.048	0.167	0.200	mg/kg	91	1.7	SW846 7471A	01/27-01/30/01	DT1A51C8
Dilution Factor: 1								
Analysis Time...: 12:06								
MS Run #.....: 1024215								

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

N Spiked analyte recovery is outside stated control limits.

**000041**

# MATRIX SPIKE SAMPLE DATA REPORT

## GC Semivolatiles

<u>PARAMETER</u>	<u>SAMPLE</u>	<u>SPIKE</u>	<u>MEASRD</u>	<u>PERCENT</u>			<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMT</u>	<u>AMOUNT</u>	<u>UNITS</u>	<u>RECOVERY</u>	<u>RPD</u>	
TPH (as Diesel)		250	200	mg/kg	80		SW846 8015B
		250	218	mg/kg	87	8.6	SW846 8015B
<u>SURROGATE</u>	<u>PERCENT</u>			<u>RECOVERY</u>			<u>LIMITS</u>
	<u>RECOVERY</u>			<u>LIMITS</u>			
Benzo(a)pyrene		91		(60 - 130)			
		98		(60 - 130)			

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print denotes control parameters**

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# MATRIX SPIKE SAMPLE DATA REPORT

## GC Volatiles

Client Lot #....: E1A220190 Work Order #....: DT3MF1AE-MS Matrix.....: SOLID  
MS Lot-Sample #: E1A240143-036 DT3MF1AF-MSD  
Date Sampled...: 01/23/01 10:24 Date Received..: 01/23/01 17:30 MS Run #.....: 1026127  
Prep Date.....: 01/25/01 Analysis Date...: 01/25/01  
Prep Batch #....: 1026299 Analysis Time...: 23:54  
Dilution Factor: 1 Analyst ID.....: 001464 Instrument ID...: G16

PARAMETER	SAMPLE	SPike	MEASRD	PERCENT			METHOD	
	AMOUNT	AMT	AMOUNT	UNITS	RECOVERY	RPD		
TPH (as Gasoline)	ND	5.00	5.25	mg/kg	105		SW846 8015B	
	ND	5.00	5.44	mg/kg	109	3.5	SW846 8015B	
SURROGATE	PERCENT			RECOVERY			LIMITS	
	<u>RECOVERY</u>			<u>LIMITS</u>				
a,a,a-Trifluorotoluene (TFT)		111			(60 - 130)			
		112			(60 - 130)			

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print denotes control parameters**

000043

**MATRIX SPIKE SAMPLE DATA REPORT**

**GC/MS Volatiles**

Client Lot #....: E1A220190      Work Order #....: DT3251AH-MS      Matrix.....: WATER  
 MS Lot-Sample #: E1A240196-002      DT3251AJ-MSD  
 Date Sampled...: 01/24/01 08:47 Date Received...: 01/24/01 12:00 MS Run #.....: 1026093  
 Prep Date.....: 01/26/01 Analysis Date...: 01/26/01  
 Prep Batch #....: 1026221 Analysis Time...: 06:16  
 Dilution Factor: 1 Analyst ID.....: 004648      Instrument ID.: MSC

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCENT			METHOD
	AMOUNT	AMT	AMOUNT	UNITS	RECOVERY	RPD	
Benzene	ND	10.0	9.85	ug/L	98		SW846 8260B
	ND	10.0	9.68	ug/L	97	1.7	SW846 8260B
1,1-Dichloroethene	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.9	ug/L	109	0.64	SW846 8260B
Chlorobenzene	ND	10.0	10.2	ug/L	102		SW846 8260B
	ND	10.0	9.97	ug/L	100	2.1	SW846 8260B
Toluene	ND	10.0	9.82	ug/L	98		SW846 8260B
	ND	10.0	9.66	ug/L	97	1.6	SW846 8260B
Trichloroethene	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	10.7	ug/L	107	0.18	SW846 8260B

SURROGATE	PERCENT		RECOVERY
	RECOVERY	LIMITS	
Bromofluorobenzene	105	(75 - 120)	
	99	(75 - 120)	
1,2-Dichloroethane-d4	110	(65 - 130)	
	108	(65 - 130)	
Toluene-d8	108	(80 - 130)	
	103	(80 - 130)	

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

**000044**

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: E1A220190      Work Order #....: DTVNQ1DD-MS      Matrix.....: SOLID  
 MS Lot-Sample #: E1A180314-001      DTVNQ1DE-MSD  
 Date Sampled....: 01/16/01 12:40 Date Received...: 01/18/01 17:00 MS Run #.....: 1027040  
 Prep Date.....: 01/26/01 Analysis Date...: 01/26/01  
 Prep Batch #....: 1027135 Analysis Time...: 12:58  
 Dilution Factor: 1 Analyst ID.....: 015590      Instrument ID...: MSG

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>RPD</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>		<u>LIMITS</u>	
1,1-Dichloroethene	95 88	(60 - 150) (60 - 150)	8.2	(0-30)	SW846 8260B SW846 8260B
Benzene	95 88	(70 - 140) (70 - 140)	7.5	(0-30)	SW846 8260B SW846 8260B
Trichloroethene	97 92	(70 - 130) (70 - 130)	5.7	(0-30)	SW846 8260B SW846 8260B
Toluene	92 85	(70 - 130) (70 - 130)	8.2	(0-30)	SW846 8260B SW846 8260B
Chlorobenzene	96 88	(70 - 130) (70 - 130)	8.7	(0-30)	SW846 8260B SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	96	(70 - 130)
	101	(70 - 130)
1,2-Dichloroethane-d4	83	(60 - 140)
	88	(60 - 140)
Toluene-d8	90	(70 - 130)
	93	(70 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000045

**MATRIX SPIKE SAMPLE EVALUATION REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

**Date Sampled....:** 01/22/01 07:50 **Date Received...:** 01/22/01 17:00

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>MS Lot-Sample #:</b> E1A220190-003 <b>Prep Batch #....:</b> 1024461							
Aluminum	NC	(80 - 120)		SW846 6010B		01/25-01/27/01 DT1A51A3	
	NC	(80 - 120)	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51A4	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					
Arsenic	90	(75 - 115)		SW846 6010B		01/25-01/27/01 DT1A51A5	
	93	(75 - 115) 2.7	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51A6	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					
Antimony	36 N	(75 - 115)		SW846 6010B		01/25-01/27/01 DT1A51A7	
	28 N	(75 - 115) 25	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51A8	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					
Barium	90	(80 - 120)		SW846 6010B		01/25-01/27/01 DT1A51A9	
	99	(80 - 120) 6.5	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51CA	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					
Cadmium	101	(80 - 120)		SW846 6010B		01/25-01/27/01 DT1A51CC	
	103	(80 - 120) 2.4	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51CD	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					
Chromium	93	(85 - 120)		SW846 6010B		01/25-01/27/01 DT1A51CE	
	114	(85 - 120) 8.4	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51CF	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					
Beryllium	101	(80 - 120)		SW846 6010B		01/25-01/27/01 DT1A51CG	
	105	(80 - 120) 3.5	(0-25)	SW846 6010B		01/25-01/27/01 DT1A51CH	
		Dilution Factor: 1					
		Analysis Time...: 02:15		Instrument ID...: M01		Analyst ID.....: 003119	
		MS Run #.....: 1024213					

(Continued on next page)

**000046**

**MATRIX SPIKE SAMPLE EVALUATION REPORT**

**TOTAL Metals**

**Client Lot #....:** E1A220190

**Matrix.....:** SOLID

**Date Sampled....:** 01/22/01 07:50 **Date Received...:** 01/22/01 17:00

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Lead	91	(80 - 120)			SW846 6010B	01/25-01/27/01	DT1A51CJ
	95	(80 - 120) 3.0	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CK
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Selenium	86	(70 - 115)			SW846 6010B	01/25-01/27/01	DT1A51CL
	89	(70 - 115) 2.5	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CM
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Silver	88	(80 - 120)			SW846 6010B	01/25-01/27/01	DT1A51CN
	90	(80 - 120) 2.5	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CP
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Cobalt	98	(80 - 120)			SW846 6010B	01/25-01/27/01	DT1A51CQ
	100	(80 - 120) 1.9	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CR
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Copper	96	(80 - 120)			SW846 6010B	01/25-01/27/01	DT1A51CT
	105	(80 - 120) 4.6	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CU
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Molybdenum	88	(80 - 120)			SW846 6010B	01/25-01/27/01	DT1A51CV
	89	(80 - 120) 0.96	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CW
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Nickel	94	(80 - 120)			SW846 6010B	01/25-01/27/01	DT1A51CX
	100	(80 - 120) 4.4	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51CO
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			
Thallium	95	(75 - 120)			SW846 6010B	01/25-01/27/01	DT1A51C1
	97	(75 - 120) 2.4	(0-25)		SW846 6010B	01/25-01/27/01	DT1A51C2
		Dilution Factor: 1					
				Analysis Time...: 02:15	Instrument ID...: M01		Analyst ID.....: 003119
				MS Run #.....: 1024213			

(Continued on next page)

**000047**

MATRIX SPIKE SAMPLE EVALUATION REPORT

**TOTAL Metals**

Client Lot #....: E1A220190

Matrix.....: SOLID

Date Sampled...: 01/22/01 07:50 Date Received...: 01/22/01 17:00

PARAMETER	PERCENT	RECOVERY	RPD			PREPARATION-	WORK
	RECOVERY	LIMITS	RPD	LIMITS	METHOD	ANALYSIS DATE	ORDER #
Vanadium	92	(80 - 120)		SW846	6010B	01/25-01/27/01	DT1A51C3
	103	(80 - 120)	5.2	(0-25)	SW846	6010B	01/25-01/27/01 DT1A51C4
Dilution Factor: 1							
Zinc	95	(80 - 120)		SW846	6010B	01/25-01/27/01	DT1A51C5
	107	(80 - 120)	4.8	(0-25)	SW846	6010B	01/25-01/27/01 DT1A51C6
Dilution Factor: 1							
				Analysis Time...:	02:15	Instrument ID...: M01	Analyst ID.....: 003119
				MS Run #.....:	1024213		

MS Lot-Sample #: E1A220190-003 Prep Batch #....: 1024466

Mercury	89	(80 - 120)		SW846	7471A	01/27-01/30/01	DT1A51C7
	91	(80 - 120)	1.7	(0-20)	SW846	7471A	01/27-01/30/01 DT1A51C8
Dilution Factor: 1							
Analysis Time...: 12:06 Instrument ID...: M04 Analyst ID.....: 021088							
				MS Run #.....:	1024215		

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

N Spiked analyte recovery is outside stated control limits.

000048

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC Semivolatiles

PARAMETER	PERCENT	RECOVERY	RPD	RPD	METHOD
	RECOVERY	LIMITS		LIMITS	
TPH (as Diesel)	80	(60 - 130)	8.6	(0-35)	SW846 8015B
	87	(60 - 130)			SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Benzo (a) pyrene	91	(60 - 130)
	98	(60 - 130)

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print denotes control parameters**

000049

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC Volatiles

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
<b>TPH (as Gasoline)</b>	<b>105</b>	<b>(80 - 140)</b>			<b>SW846 8015B</b>
	<b>109</b>	<b>(80 - 140)</b>	<b>3.5</b>	<b>(0-40)</b>	<b>SW846 8015B</b>
<b>SURROGATE</b>		<u>PERCENT RECOVERY</u>		<u>RECOVERY LIMITS</u>	
a,a,a-Trifluorotoluene (TFT)		111		(60 - 130)	
		112		(60 - 130)	

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print** denotes control parameters

000050

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #....: E1A220190      Work Order #....: DT3251AH-MS      Matrix.....: WATER  
 MS Lot-Sample #: E1A240196-002      DT3251AJ-MSD  
 Date Sampled...: 01/24/01 08:47 Date Received...: 01/24/01 12:00 MS Run #.....: 1026093  
 Prep Date.....: 01/26/01 Analysis Date...: 01/26/01  
 Prep Batch #....: 1026221 Analysis Time...: 06:16  
 Dilution Factor: 1 Analyst ID.....: 004648      Instrument ID..: MSC

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>RPD</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>		<u>LIMITS</u>	
Benzene	98	(75 - 120)			SW846 8260B
	97	(75 - 120)	1.7	(0-25)	SW846 8260B
1,1-Dichloroethene	108	(70 - 130)			SW846 8260B
	109	(70 - 130)	0.64	(0-25)	SW846 8260B
Chlorobenzene	102	(80 - 120)			SW846 8260B
	100	(80 - 120)	2.1	(0-25)	SW846 8260B
Toluene	98	(80 - 120)			SW846 8260B
	97	(80 - 120)	1.6	(0-25)	SW846 8260B
Trichloroethene	107	(75 - 130)			SW846 8260B
	107	(75 - 130)	0.18	(0-25)	SW846 8260B
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>		<u>RECOVERY</u>	
	<u>RECOVERY</u>			<u>LIMITS</u>	
Bromofluorobenzene	105			(75 - 120)	
	99			(75 - 120)	
1,2-Dichloroethane-d4	110			(65 - 130)	
	108			(65 - 130)	
Toluene-d8	108			(80 - 130)	
	103			(80 - 130)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000051

# **Subcontracted**

# **Analysis**

**000052**

# PTS Laboratories, Inc.

Geotechnical Services

8100 Secura Way • Santa Fe Springs • CA 90670  
Phone (562) 907-3607 • Fax (562) 907-3610

February 14, 2001

Ms. Diane Suzuki  
Severn Trent  
1721 S. Grand Ave.  
Santa Ana, CA 92705

Re: Kennedy Jenks  
PTS File: 31036

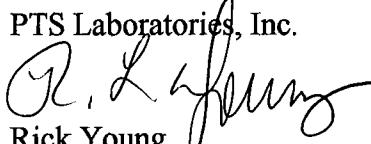
Dear Ms. Suzuki:

Enclosed are final data for samples submitted from your Project # SR028709. All analyses were performed by applicable ASTM, EPA or API methodology. Samples will be retained for 30 days before disposal unless other arrangements are made.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please feel free to call myself or Larry Kunkel, District Manager, should you have any questions or require additional information.

Sincerely,

PTS Laboratories, Inc.

  
Rick Young

Project Manager

RY/vk

encl.

000053

**PHYSICAL PROPERTIES DATA**

(METHODOLOGY: ASTM D2937, ASTM D854, WALKLEY-BLACK)

PROJECT NAME: Kennedy Jenks  
PROJECT NO: SR028709

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	BULK DENSITY (g/cc)	SPECIFIC GRAVITY	TOTAL POROSITY, %Vb	25.0 PSI CONFINING STRESS		
						TOTAL ORGANIC CARBON mg/kg	EFFECTIVE PERMEABILITY TO WATER (millidarcy)	NATIVE STATE EFFECTIVE HYDRAULIC CONDUCTIVITY (cm/s)
I-34-4.5	4.50	V	1.87	2.72	31.1	610	0.67	6.49E-07
I-34-20	20.00	V	1.51	2.76	45.0	500	0.66	6.39E-07

**000054**

(1) Sample Orientation: H = horizontal; V = vertical      Vb = Bulk Volume, cc; Pv = Pore Volume, cc; ND = Not Detected

**PARTICLE SIZE SUMMARY**

(METHODOLOGY: ASTM D4464M)

PROJECT NAME:  
PROJECT NO:N/A  
403201

Sample ID	Depth, ft.	USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent			Silt & Clay
				Gravel	Coarse	Sand Size	
I-34-4.5	4.5	Silt	0.030	0.00	0.00	0.03	19.76
I-34-20	20	Silt	0.027	0.00	0.00	0.02	17.88

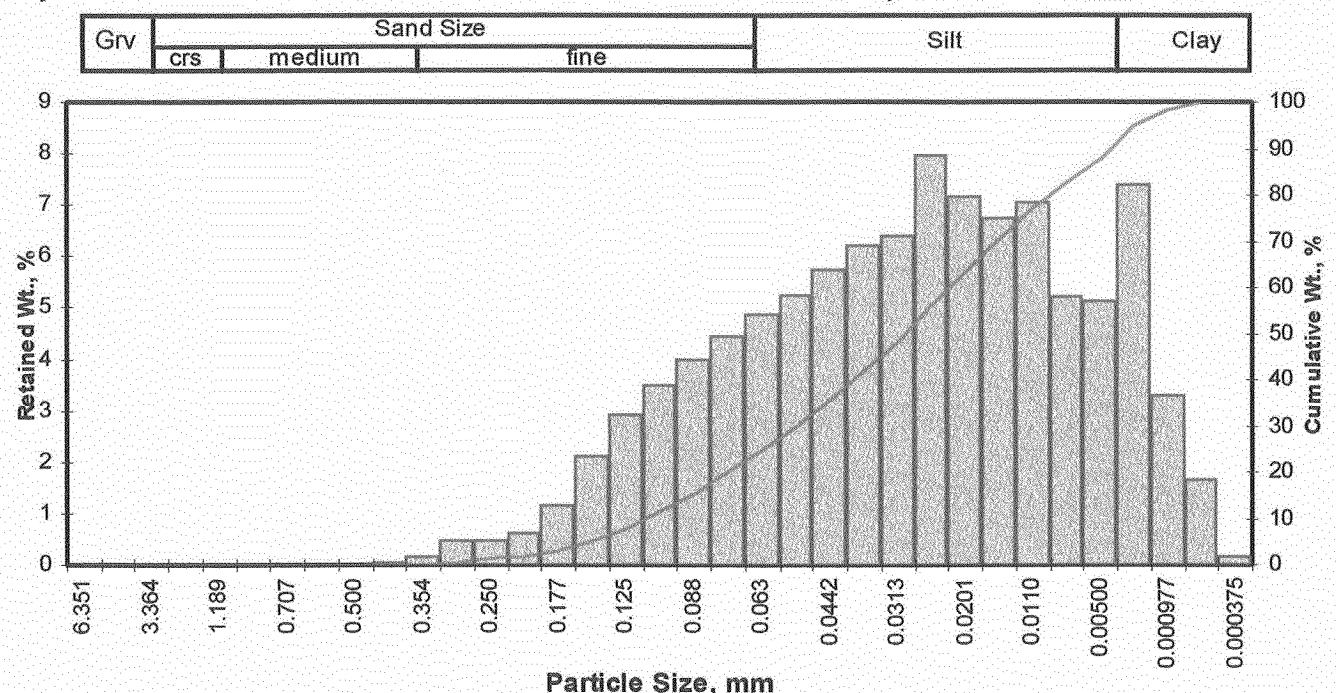
000055

# PTS Laboratories, Inc.

## Particle Size Analysis - ASTM D4464M

Client: Severn Trent Laboratories  
 Project: N/A  
 Project No: 403201

PTS File No: 31036  
 Sample ID: I-34-4.5  
 Depth, ft: 4.5'



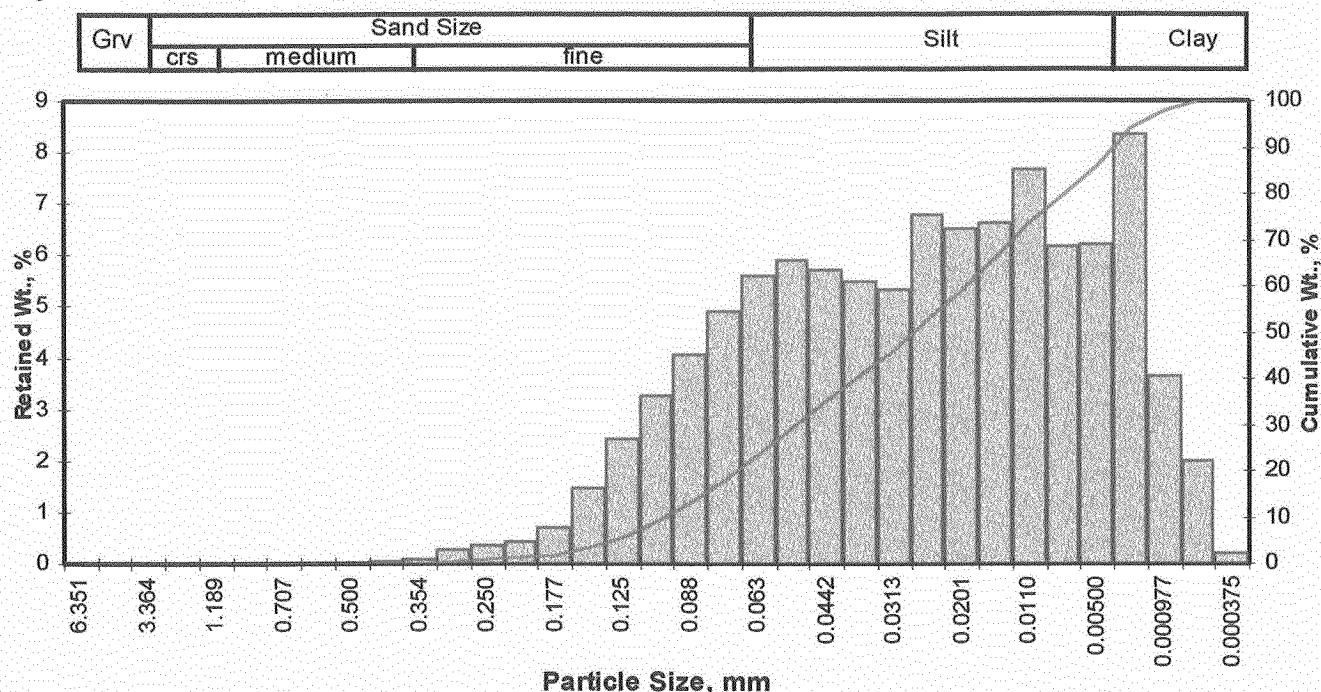
Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent	Cumulative Weight Percent greater than			
Inches	Millimeters						Weight percent	Phi Value	Particle Size Inches	Particle Size Millimeters
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00	5	2.76	0.0058	0.148
0.1873	4.757	-2.25	4	0.00	0.00	0.00	10	3.15	0.0044	0.112
0.1324	3.364	-1.75	6	0.00	0.00	0.00	16	3.54	0.0034	0.086
0.0787	2.000	-1.00	10	0.00	0.00	0.00	25	4.02	0.0024	0.062
0.0468	1.189	-0.25	16	0.00	0.00	0.00	40	4.68	0.0015	0.039
0.0331	0.841	0.25	20	0.00	0.00	0.00	50	5.07	0.0012	0.030
0.0278	0.707	0.50	25	0.00	0.00	0.00	60	5.49	0.0009	0.022
0.0234	0.595	0.75	30	0.00	0.00	0.00	75	6.35	0.0005	0.012
0.0197	0.500	1.00	35	0.00	0.00	0.00	84	7.20	0.0003	0.007
0.0166	0.420	1.25	40	0.03	0.03	0.03	90	8.10	0.0001	0.004
0.0139	0.354	1.50	45	0.14	0.14	0.17	95	9.03	0.0001	0.002
0.0117	0.297	1.75	50	0.44	0.44	0.62				
0.0098	0.250	2.00	60	0.46	0.46	1.07				
0.0083	0.210	2.25	70	0.60	0.60	1.68				
0.0070	0.177	2.50	80	1.15	1.15	2.83				
0.0059	0.149	2.75	100	2.11	2.11	4.94				
0.0049	0.125	3.00	120	2.92	2.92	7.86				
0.0041	0.105	3.25	140	3.50	3.50	11.36				
0.0035	0.088	3.50	170	3.98	3.98	15.34				
0.0029	0.074	3.75	200	4.45	4.45	19.79				
0.0025	0.063	4.00	230	4.85	4.85	24.64				
0.0021	0.053	4.25	270	5.26	5.26	29.90				
0.00174	0.0442	4.50	325	5.75	5.75	35.65				
0.00146	0.0372	4.75	400	6.20	6.20	41.85				
0.00123	0.0313	5.00	450	6.39	6.39	48.25				
0.000986	0.0250	5.32	500	7.98	7.98	56.23				
0.000790	0.0201	5.64	635	7.15	7.15	63.38				
0.000615	0.0156	6.00		6.74	6.74	70.12				
0.000435	0.0110	6.50		7.06	7.06	77.18				
0.000308	0.00781	7.00		5.21	5.21	82.39				
0.000197	0.00500	7.65		5.12	5.12	87.52				
0.000077	0.00195	9.00		7.38	7.38	94.90				
0.000038	0.000977	10.00		3.30	3.30	98.20				
0.000019	0.000488	11.00		1.64	1.64	99.84				
0.000015	0.000375	11.38		0.16	0.16	100.00				
<b>TOTALS</b>				100.00	100.00	100.00				

**PTS** Laboratories, Inc.

## Particle Size Analysis - ASTM D4464M

**Client:** Severn Trent Laboratories  
**Project:** N/A  
**Project No:** 403201

**PTS File No:** 31036  
**Sample ID:** I-34-20  
**Depth, ft:** 20.00



Opening		Phi of Screen	U.S. No.	Sample Weight, grams	Increment Weight, percent	Cumulative Weight, percent	Cumulative Weight Percent greater than			
Inches	Millimeters						Weight percent	Phi Value	Particle Size Inches	Millimeters
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00	5	2.93	0.0052	0.131
0.1873	4.757	-2.25	4	0.00	0.00	0.00	10	3.32	0.0040	0.100
0.1324	3.364	-1.75	6	0.00	0.00	0.00	16	3.65	0.0031	0.079
0.0787	2.000	-1.00	10	0.00	0.00	0.00	25	4.06	0.0024	0.060
0.0468	1.189	-0.25	16	0.00	0.00	0.00	40	4.72	0.0015	0.038
0.0331	0.841	0.25	20	0.00	0.00	0.00	50	5.19	0.0011	0.027
0.0278	0.707	0.50	25	0.00	0.00	0.00	60	5.69	0.0008	0.019
0.0234	0.595	0.75	30	0.00	0.00	0.00	75	6.63	0.0004	0.010
0.0197	0.500	1.00	35	0.00	0.00	0.00	84	7.46	0.0002	0.006
0.0166	0.420	1.25	40	0.02	0.02	0.02	90	8.33	0.0001	0.003
0.0139	0.354	1.50	45	0.09	0.09	0.11	95	9.24	0.0001	0.002
0.0117	0.297	1.75	50	0.28	0.28	0.39				
0.0098	0.250	2.00	60	0.33	0.33	0.72				
0.0083	0.210	2.25	70	0.42	0.42	1.13				
0.0070	0.177	2.50	80	0.70	0.70	1.84				
0.0059	0.149	2.75	100	1.45	1.45	3.29				
0.0049	0.125	3.00	120	2.40	2.40	5.69				
0.0041	0.105	3.25	140	3.26	3.26	8.95				
0.0035	0.088	3.50	170	4.05	4.05	13.00				
0.0029	0.074	3.75	200	4.91	4.91	17.91				
0.0025	0.063	4.00	230	5.61	5.61	23.52				
0.0021	0.053	4.25	270	5.88	5.88	29.40				
0.00174	0.0442	4.50	325	5.71	5.71	35.11				
0.00146	0.0372	4.75	400	5.46	5.46	40.57				
0.00123	0.0313	5.00	450	5.32	5.32	45.89				
0.000986	0.0250	5.32	500	6.76	6.76	52.65				
0.000790	0.0201	5.64	635	6.51	6.51	59.16				
0.000615	0.0156	6.00		6.61	6.61	65.77				
0.000435	0.0110	6.50		7.65	7.65	73.42				
0.000308	0.00781	7.00		6.15	6.15	79.57				
0.000197	0.00500	7.65		6.21	6.21	85.78				
0.000077	0.00195	9.00		8.36	8.36	94.14				
0.000038	0.000977	10.00		3.65	3.65	97.79				
0.000019	0.000488	11.00		2.00	2.00	99.79				
0.000015	0.000375	11.38		0.21	0.21	100.00				
<b>TOTALS</b>				<b>100.00</b>	<b>100.00</b>	<b>100.00</b>				
Grain Size Description				Silt (ASTM-USCS Scale)						
				(based on Mean from Trask)						
Description				Retained on Sieve #		Weight Percent				
				4		0.00				
				10		0.00				
				40		0.02				
				200		17.88				
				>0.005 mm		67.87				
				<0.005 mm		14.22				
						<b>Total</b>				
						<b>100</b>				

Severn Trent Laboratories, Inc  
SAMPLE ANALYSIS REQUISITION

31036

LABORATORY: G1 PTS Laboratories, Inc.  
8100 SECURA WAY  
SANTA FE SPRINGS, CA 90670

NEED ANALYTICAL REPORT BY  
1/28/01

ATTN: RICHARD L. YOUNG

LAB PURCHASE ORDER: SR028709

CLIENT CODE: 366740 PROJECT MANAGER: Diane Suzuki

NUMBER OF SAMPLES IN LOT: 0002

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
E1A220190-002 DT1AV-1-AA	1/22/01	Archive (ARCHIVE ) METHOD: <u>NONE</u>
E1A220190-005 DT1A7-1-AA	1/22/01	Archive (ARCHIVE ) METHOD: <u>NONE</u>

Geotechnical Test  
See Attached COC

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: COURIER DATE: 1/22/01

SEND REPORT TO: DIANE SUZUKI

SAMPLE RECEIVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Los Angeles

INT: \_\_\_\_\_  
PTS Laboratories, Inc.  
8100 SECURA WAY  
SANTA FE SPRINGS, CA 90670

1/22/01 21:11:04

RELINQUISHED BY: Receives

RELINQUISHED BY: John

RECEIVED FOR LAB BY: R. G. J.

DATE/TIME: 01/22/01, 22:15  
DATE/TIME: 1-23-01 @ 74W  
DATE/TIME: 1/23/01 ~ 1400

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

000058

